

DEPARTMENT OF PATHOLOGICAL CHEMISTRY

Feb 8 1919

Sir Robert A. Falconer,
President,
University of Toronto,

Dear Sir Robert,

The attached letter is largely of the nature of a Special report with recommendations upon the organization of my Department in its relation to the Clinical ones. If it had not been for the question raised in the first paragraph, it would probably not have been sent you, till your Annual Call for a Departmental report was issued. I beg therefore that you will not be alarmed by its length, nor suppose that I expect an immediate decision upon the problems which I bring in this way to your attention.

Yours very sincerely
Andrew Hume

University of Toronto

TORONTO, CANADA

DEPARTMENT OF PATHOLOGICAL CHEMISTRY

February 7th, 1919.

The President,

University of Toronto.

Dear Mr. President:-

Major Imrie, Lecturer in Pathological Chemistry, has lately received from Western University the offer of an appointment, which in respect of the salary attached possesses much greater attractions than his present one. He is nevertheless disinclined, unless forced by financial necessity, to abandon the wider range of scientific opportunity afforded by a connection with Toronto. He explains to me that his immediate interest lies in the application of chemical methods to medical research, while his ultimate hope is to acquire through original investigations a reputation (and therewith of course an income) as a consultant in diseases of metabolism. To make such a career possible he would require, in addition to an academic position, some opportunity for private practice. He therefore offers to remain with me as Lecturer on condition that he be permitted, outside of academic hours, to do consulting work in clinical chemistry.

Such an arrangement would not be strictly consistent with my ideas of academic propriety. I consider that the title and emoluments of a Lecturer should be enjoyed by those only, who have definitely selected a purely academic career, and who therefore give

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to the University Department, with which they may be connected, their entire time and their total energy. But I am bound to admit that in the present instance I feel inclined, upon due consideration, to compromise. If Major Imrie were to resign, I should probably find it impossible, under present conditions, to find anyone of equal experience and capacity, who would accept his post at the salary available and upon the terms which I hold to be ideal. It appears, moreover, that the terms which Major Imrie proposes are those which have always prevailed in the corresponding position of the Lecturer in Bacteriology, so that, whether rightly or wrongly, a precedent has been established. For these reasons, and for one other which will appear below, I have decided, subject to your approval, to permit Major Imrie, while retaining his Lectureship, to engage in consulting work during extra-academic hours.

The decision upon Major Imrie's case had to be taken at once. There are other and wider problems connected with the organization of my Department, which will have to be faced in the very near future. They have been repeatedly forced on my attention since I came to Toronto, and have already in part been brought to your notice (see my "Report to the President", April 3rd, 1916 and March 28th, 1918). Now that we are preparing, as a University, to turn from war to reconstruction, I feel at liberty to urge upon you

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the importance of at length attempting their solution. I am especially encouraged to do so by the news that the University is about to reorganize the Department of Medicine, with a full-time Professor in charge and with a budget which will enable it to engage worthily in medical research. It is true that of this approaching reorganization the Faculty has as yet received no official notification, but, as it appears nevertheless to be matter of common knowledge, I assume that I may take it openly into consideration. It has a very direct bearing upon the problems that I have in mind. The present therefore appears to me to be an appropriate occasion for bringing these problems formally to your attention.

The Department of Pathological Chemistry should, I think, fulfil two separate functions. The first is the purely academic one, in the fulfilment of which it acts as a self contained unit, providing instruction and conducting independent research in the subject of which it has charge. The other is the broader one of keeping before the clinical departments the latest results of chemical research, of providing these departments with facilities for the routine application of chemical tests, of assisting them with advice and material in such of their own investigations as require the employment of chemical methods or chemical knowledge,

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and, in general, of acting as one of the links between them and the fundamental sciences. Of the manner in which the Department under my control has fulfilled the first of these functions I have nothing to say. In respect to the second it has accomplished, I regret to report, as yet almost nothing.

The reasons for this failure are to be found, I believe, in the lack of three essentials:

- (1) A proper interest on the part of the clinical staff and the Hospital authorities.
- (2) A system of organization which makes direct provision for coordinating the work of the laboratory with that of the clinical departments.
- (3) A staff adequate to keep any such system, once devised, in operation.

The first of these essentials will, I trust, be automatically provided for in the reorganization of the Department of Medicine. The chief of that Department, if he be properly selected, will moreover be found to be deeply interested in the manner in which the second and third requirements of the situation are to be met. It is therefore not my intention to press for any decision thereupon until the future Professor of Medicine

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shall have been called into conference; but I think it proper
that I should in the meantime put upon record certain ^{ideas and} proposals
of my own.

Every large modern hospital in the United States makes, I believe, some provision for the expert performance of a variety of diagnostic tests of a chemical nature, which have become to-day as much a part of the standard routine, as are, in appropriate cases, the Wassermann test or the X-ray examination. Several go further by providing facilities for the conduct, either as routine or as research, of prolonged metabolism experiments upon selected types of cases. In these respects Toronto is decidedly behind the times. It is true, we have been enabled, by a grant from the Special Research Fund, to purchase apparatus for the study of gaseous metabolism, for the installation of which the Hospital has furnished a room, and with which Dr. Rolph (of this Department) has already commenced a series of investigations. But for more general metabolic work, and for routine analytical tests beyond the skill of the ordinary interne, we have no provision whatever. In the provision required the Hospital itself ought doubtless to take some part. Possibly it should furnish the necessary rooms and equipment. On that

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point I have not yet formed a definite conviction, but I am strongly of the opinion that at least the necessary personnel should be nominated, paid and controlled by the University. I think, in fact, that just as the Department of Pathology nominates an Assistant Pathologist, who performs the pathological work of the Hospital, so the Department of Pathological Chemistry should nominate an Assistant Pathological Chemist to do the Hospital's chemical work. By such an arrangement the Department would be enabled on the one hand to place at the service of the clinical staff an expert in chemical technique, and on the other to keep in closer touch than is now possible with the problems and the requirements of the Departments of Medicine and Surgery. If, at the same time, the Hospital were induced to place at our disposal a metabolism ward, the foundation would be laid for the development of a very important branch of medical research.

To operate successfully the entire scheme thus briefly outlined, the following staff would be required:

- (a) An experienced Pathological Chemist, responsible directly to the head of this Department. His duties would include the supervision of the routine work, the personal conduct of special research in problems of pathological metabolism, and a share in the work of instruction. In the performance of these duties he would act as the "liaison officer" between

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this Department and the clinical ones. He should have in the University the grade of Lecturer, with some such designation as "on Pathological Metabolism"; and he should receive from the Hospital the appointment of "Assistant Pathological Chemist". His salary should be \$2000, and he should have the privilege of doing a strictly limited amount of private work.

- (b) A technical assistant, male or female, competent to carry out the routine analytical work. Salary \$1200.
- (c) A laboratory attendant at (say) \$500.
- (d) One of the hospital internes, who should be delegated in rotation to receive training, and to act as temporary assistants.
- (e) A dietitian, with assistants, furnished and paid, however, by the Hospital.

If a position, such as I have described under (a), were instituted, I should at once recommend that it be offered to Major Imrie. The fact that I should like to keep him available for the purpose constitutes the additional reason, at which I hinted, for consenting to the terms under which he is willing for the moment to remain at Toronto. If he accepted, as I am sure he would (for it would provide precisely the kind of opportunity he seeks)

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the position he holds at present upon my staff would be rendered vacant. In such a case I should propose that the Department be further strengthened by the institution, in place of the present Lectureship, of an Assistant Professorship at a salary of \$2500. This would place it upon the same footing as the Departments of Physiology and Biochemistry. It would of course be required of an Assistant Professor that he engage in no outside work whatever, and that he look solely to the University for advancement. His duties would be strictly academic, and he would have no direct connection with the work of the Hospital.

If all of the proposals outlined above were adopted, the salary list of my Department would be increased by about \$4000. This may seem excessive, but it may be pointed out that what I suggest is practically the institution of an entirely new sub-department, intended to meet a real defect in the organization of our Medical School; that it might be expected to act in no small degree as a stimulus to research in Medicine and Surgery; and that it should not be considered in relation to this Department alone, but in conjunction with

- (1) the reorganization of the Department of Medicine,
- (2) the work being done, and in future to be attempted, under the Special Research Fund,

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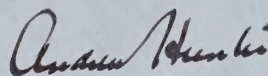
The President -----9-----

(3) the suggestions which have, from time to time, been made for the enlargement of the Pathological Building.

May I therefore ask that you give the whole scheme careful consideration, and that, when you have leisure, you permit me to have an opportunity of discussing it with you in conversation?

I have the honour to be

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Andrew Hunter".

Professor of Pathological Chemistry.

DEPARTMENT OF PHYSIOLOGY
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February 10th. 1919

Sir Robert Falconer.

President University of Toronto.

Dear Sir, Robert,,

In reply to your letter of February 7th. , I think it important to point out in the article to which you refer, that research work by every member of the staff is, and has been in active prosecution in the Department of Physiology. Dr. Hartman with the collaboration of the Fellows in Physiology, ~~has~~ during the two years preceding my appointment here, ^{has} been engaged in an investigation concerning the exact mode of action of the internal secretion produced by the suprarenal capsule. It has been shown by this work that the action of this secretion on the animal body is of a highly complex nature, and therefore, that the important conclusions which some have drawn as to the significance of this secretion in the animal economy are probably unsound.

Dr. Hartman has also undertaken an extended investigation into the process of recovery of paralysed muscles produced by experimental nerve lesions in laboratory animals. The lesions are similar to those produced at the Front on man. This work will serve as a scientific basis for the method of treatment known as physio-therapy, and which is being used at Hart House.

Since I came here I have been engaged in two general problems, one, the function of the respiratory centre, and the other

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the fundamental cause of surgical shock. Needless to say, both of these problems are still in the early stages. Working in collaboration on them are, Mrs Fraser and Mr Lang. ^P Altogether, I would say that somewhat more than half of the time of every worker in the Department is devoted to research ~~work~~. There is no doubt that the more we can do of this, the greater will be our value in the community. The problems investigated cannot of course always be those which appear to have an immediate practical application. As you no doubt know, however, it has very frequently been the result of some investigation on a purely scientific problem that has proved to be the one of greatest value to mankind.

Trusting that there is some part of this letter that will be of value to you in the present connection,

I am

Respectfully yours

J. R. Macleod.

DEPARTMENT OF GEOLOGY

Feb. 3, 1919

Dear Sir Robert,

Dr. Parks tells me you would like to have a list of the researches I have carried out since becoming a professor at the University of Toronto. To give a complete list would be tedious; but I may state that the scientific papers published as a result of the work number more than 80. A number of these, however, are of the nature of reports of progress, several representing annual contributions continuing an account of the geology of a given region. About 20 are formal reports to the Bureau of Mines of Ontario or the Geological Survey at Ottawa. A number are repetitions presented as papers to Scientific Societies in U.S., England & Europe.

The most important lines of research are as follows:

The glacial and interglacial Beds of Toronto and other parts of Ontario.

The detailed mapping and report upon the Iroquois Beach in Ontario.

The examination for the Bureau of Mines of the Gold Fields of Western Ontario — continued for four years.

Monograph on the Michipicoten Iron Range.

The Iron Ranges of Lake Nipigon, etc.

The Sudbury Nickel Region — several reports for the Bureau of Mines and a monograph for ^{the} Mines Branch Ottawa. These reports with maps represented four years' ^{field} work.

The Lower Huronian Ice Age

Studies of the Permo-carboniferous Ice Age of S. Africa, Australia, India and South America — requiring 3 summers.

The Geology and Physiography of Northeastern Labrador — 2 summers.
 Physiography and glacial geology of Gaspé (last Summer — not yet published)

Also several Geographical Explorations in the Rockies — results published in the Royal Geographical Society's Journal — London.

P.S. more than a dozen former students have received an introduction to field geology as my assistants. Several are now Field Geologists of our Survey, others Mining Engineers.

Yours sincerely

A. P. Coleman

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ROYAL ONTARIO MUSEUM OF MINERALOGY,

S.W. CORNER OF BLOOR AND AVENUE ROAD,

TORONTO, CANADA,

February 4th 1919,

My Dear Sir Robert:

Professor W.A.Parks has informed me that you are preparing a report on the research now being done in the University of Toronto and that you wished me to send you information concerning the Department of Mineralogy. The research work of the last academic year is referred to I believe in your report of that year now being published-the list of papers prepared by the different members of the department being printed as usual as an appendix. Since July the members of the department have been engaged as follows:

Professor Ledoux was engaged in the study of the sands and gravels of the Province of Ontario for the Bureau of Mines but as you are aware he died on August 7th-his report on his work has been put in order for publication by Professor Parsons.

Professor Parsons was engaged by the Bureau of Mines in exploring in the gold district south of Lake Abitibi-he is now preparing his report for publication.

Mr Thomson spent the summer with the Geological Survey of Canada in northern Ontario.

The writer made during the summer several trips on behalf of the Royal Ontario Museum. The material collected is now being put in order and some of the more interesting will be the subject of research later in the year.

Yours sincerely,

T.L. Walker

University of Toronto

PRESIDENT'S OFFICE

February 7th, 1919

The Editor of the "University Monthly" informs me that he has arranged for an article for the March issue dealing with the research work which has been conducted recently in the University. This article is to be written in view of the emphasis that is now being laid upon the application of scientific research to industry. As you are aware pressure is being brought to bear upon the Universities to conduct some research work with this object in view and particularly to train men who can undertake it in the industries. Possibly some of the work that has been already done has been overlooked and I should like to be able to give the Editor accurate material from you so he may make an article that will show how far the University of Toronto has already been in line with what is now being undertaken.

Yours sincerely,

President.

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TORONTO, CANADA

DEPARTMENT OF BIOLOGY

February 14, 1919.

President Sir Robert Falconer,
University of Toronto.

Dear Mr. President:

In reply to your letter of February 7, I enclose a statement concerning this department in relation to industrial research, and have taken the liberty to incorporate certain comments representing my attitude towards the question in general as applied to this university. There is appended to the statement a letter from Dr. Huntsman in which the work on marine biology is more definitely described.

The question of economic research is nothing new to us in this department. I am gratified with what has been accomplished. But it is a source of no little disappointment to realize that for twenty years in my experience at least the whole question has simply been trifled with, when we might with proper chances have built up an organization both creditable and profitable to the country.

Yours sincerely,

B. A. Brasley

The reverse policy is now in force in this country, so much so that it some times appears as if government departments were anxious to keep these men out instead of getting them in. Dozens of these young men go each year into the professions because they see nothing in the future for the scientific specialties, and some of the more persistent escape across the border and are lost so far as Canadian service is concerned. The statement commonly made that Canadian universities are not producing men qualified for research will, I hope, soon be illuminated from all angles.

The question of undertaking economic research is frequently put in such a way as to create the impression that the staff of the university lacks willingness, ability or facilities. None of these have any significance. I believe that most of the prospective workers are reaching out not for opportunities but for time, and in an undergraduate institution having as we have a fundamental conception of our obligations to the youth, which does not obtain in many successful research academic institutions, the only hope of success consists in building a research staff on to the present organization for such special purposes as may be important for Canada.

B. A. Brewley.

University of Toronto, Feb. 11, 1919.

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Prof. B. A. Bensley,

University of Toronto.

Dear Prof. Bensley:

In reply to your query, I may say that all the work which I have been carrying on in the last five years or with which I have been associated has had the economic outlook in mind. This has been the policy of the Biological Board in recent years and very few of the problems investigated at the Atlantic Biological Station have been virtually free from the economic outlook.

The subjoined list of subjects of researches, which I have been carrying on or with which I have been associated in an initiatory and advisory capacity, has been divided into two groups, those of the first group having a more direct economic bearing than those of the second.

I. The growth of the Atlantic herring.

A disease of the salmon of the Miramichi river.

The life history of the Canadian plaice.

The densities of the water in St. John harbour.

The life history of the smelt.

The life history of the alewife.

The mating of lobsters, for Prof. A.P.Knight, Queen's University.

The bacteriology of sardines, by Mr. W. Sadler, University of
British Columbia.

The regeneration of the limbs of the starfish, by Mr. D.B.Wilson,
University of Toronto.

The distribution of the shrimps of the order Euphausiacea, by Mr.
D.B.Wilson, University of Toronto.

The life history of the lumpfish, by Prof. P.Cox, University of
New Brunswick.

The life history of the flounder, by Dr. R.Chambers, Cornell Un-
iversity Medical College.

The life history of Elasmobranchs of Canadian Atlantic coast, by
Prof. J.W.Mavor, Union College, Schenectaday.

The life history of the cunner, by Mr. F.Johansen, Geological
Survey, Ottawa.

The bacteriology of the Atlantic herring, by Miss E.Shanly, McGill
University.

The life history of the mussel in the Bay of Fundy, by Miss B.K.
Mossop, Western University.

The life history of the muttonfish, by Dr. W.A.Clemens, University
of Toronto.

The growth of the oyster, by Prof. A.D.Robertson, Western University.

The life history of the monkfish, by Dr.C.J.Connolly, St.Francis
Xavier's College.

The bacteriology of canned lobsters, by Miss J.McFarlane, University
of Toronto.

The urea content of the flesh of grayfish and skate, by Prof. C.C.
Benson, University of Toronto.

The effect of freezing on the flesh of the hake, by Prof. C.C.Benson
and Miss R.Neff, University of Toronto.

The life history of the tomcod, by Prof. P.Cox, Univ. of N.B.

The life history of the striped bass, by Prof. P. COX, Univ. of N.B.

The effect of removal of gills on keeping qualities of fish in cold
storage, by Dr. L.Gross, McGill University.

II. The plankton of the Canadian Fisheries Expedition of 1915.

The growth of the scales in fishes.

The distribution of the fauna of the Cheticamp and Miramichi regions
in relation to physical conditions.

The general problem involved in the distribution of the fauna of the
Atlantic coast, with special reference to the fishes.

The fishes of the Cheticamp region, by Prof. P.Cox, Univ. of N.B.

The hydrography of the St.Andrews, Cheticamp and Miramichi regions,
by Prof. A.Vachon, Laval University.

The diatoms of the St. Andrews and Cheticamp regions, by Miss C.W.
Fritz, East Angus Academy.

The Algae of the Miramichi region, by Mr. A.B.Klugh, Queen's Univ.

The Isopoda of the Bay of Fundy, by the late Mr. N.A.Wallace, Univ.
of Toronto.

B.L. Hutchins

University of Toronto
TORONTO, CANADA

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DEPARTMENT OF PHYSICS

Feb. 19th, 1919.

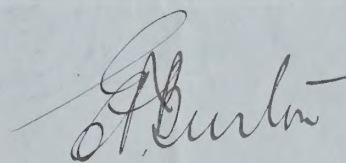
Sir Robert Falconer,

University of Toronto:

Dear Mr. President:

In reply to your letter of Feb. 7th, I am enclosing a short outline of the work carried on by the Department of Physics for the last two years. I trust that this will fulfill the requirements.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. A. Burton". The signature is written in dark ink and is positioned to the right of the typed name "J. A. Burton".

July 15th, 1918

The Manager,

Prince George Hotel,

New York.

Dear Sir:

To-day I sent you a telegram as follows: "Please reserve room, arriving New York on Friday." I expect to be in New York from Friday until Sunday and shall be glad if you can accommodate me during that time.

Yours sincerely,

(Sir Robert A. Falconer)

President.

October 5th, 1918

W. H. Porter, Esq.,
Farmers Advocate,
London.

Dear Sir:

It will give me pleasure to write a short article for you as you request for the Christmas Number of the "Farmers Advocate", and I will endeavour to let you have it by the end of October.

With kind regards, Dear,

Yours sincerely,

President.

